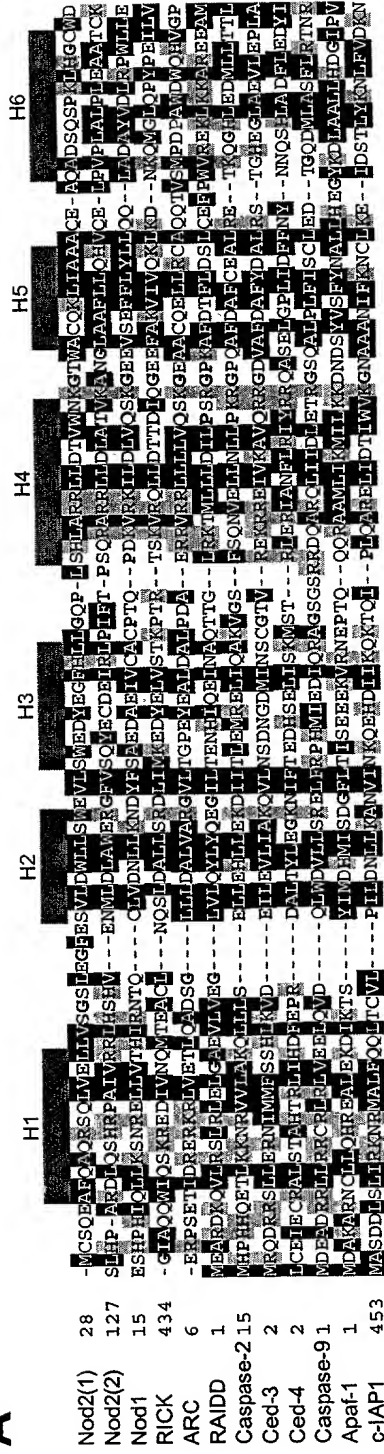
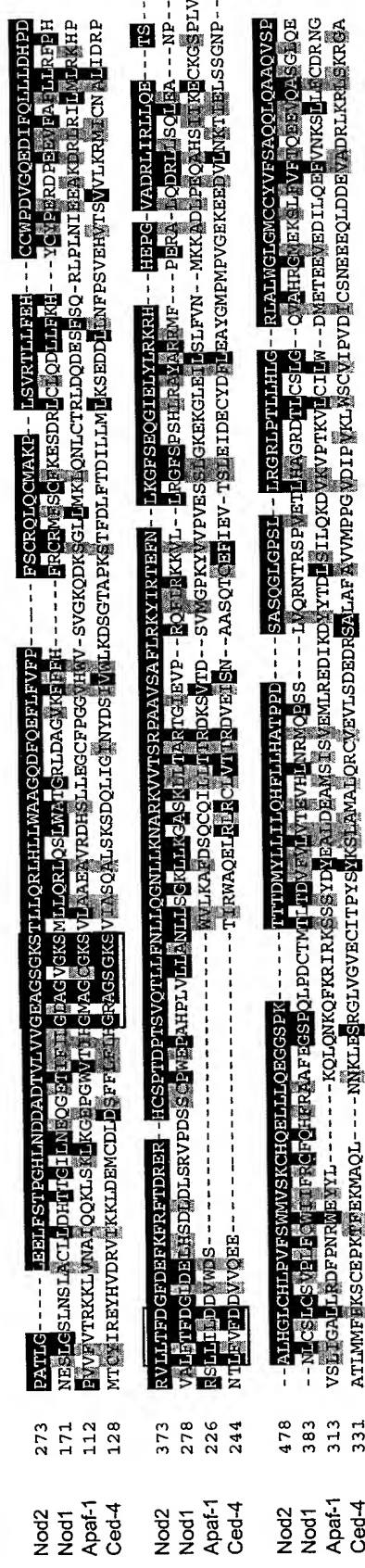


Figure 1

**A**



**B**



**C**

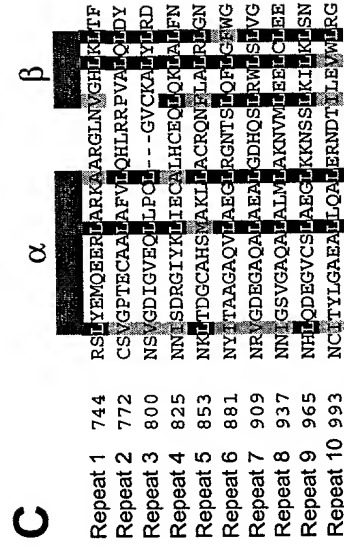


Figure 2

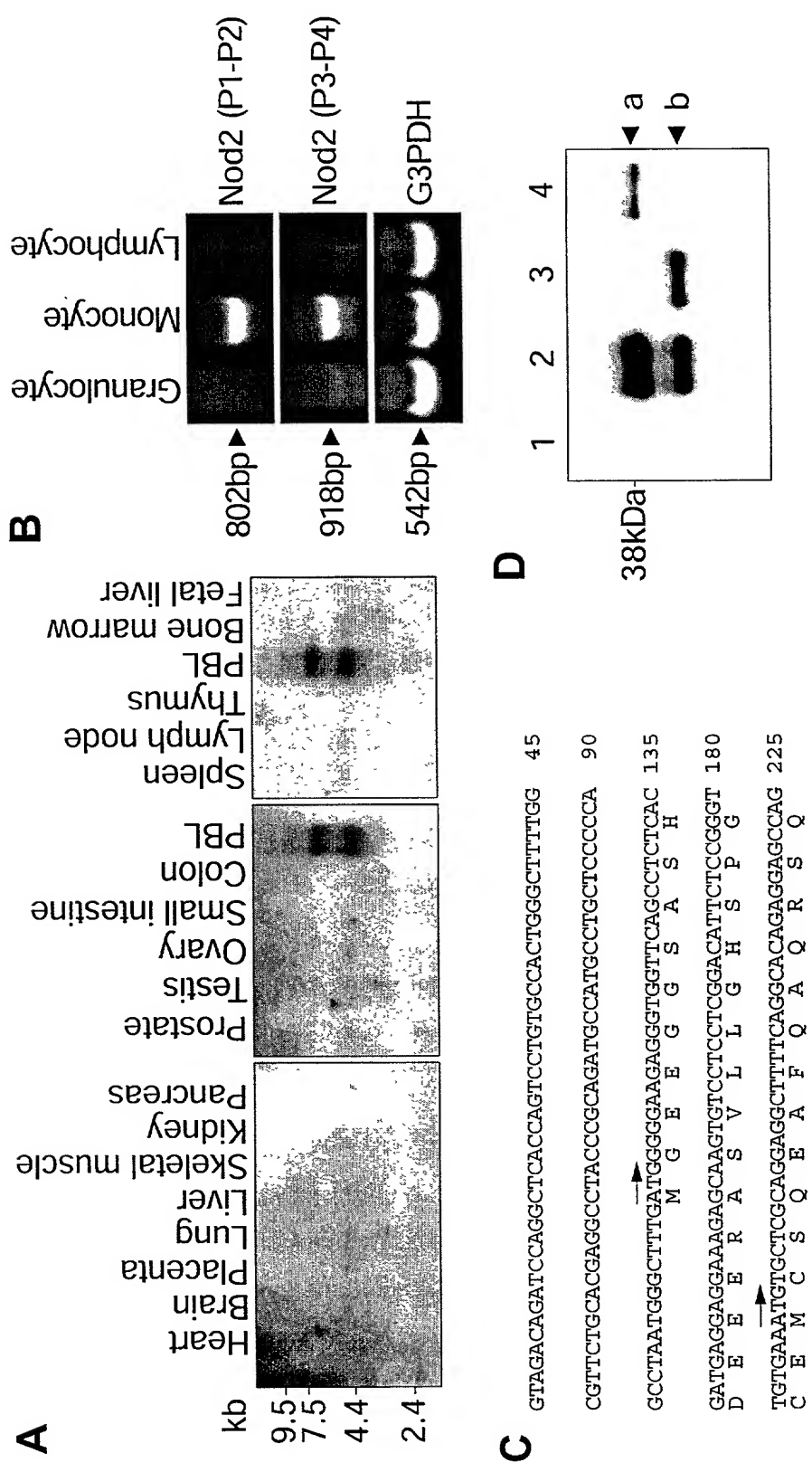


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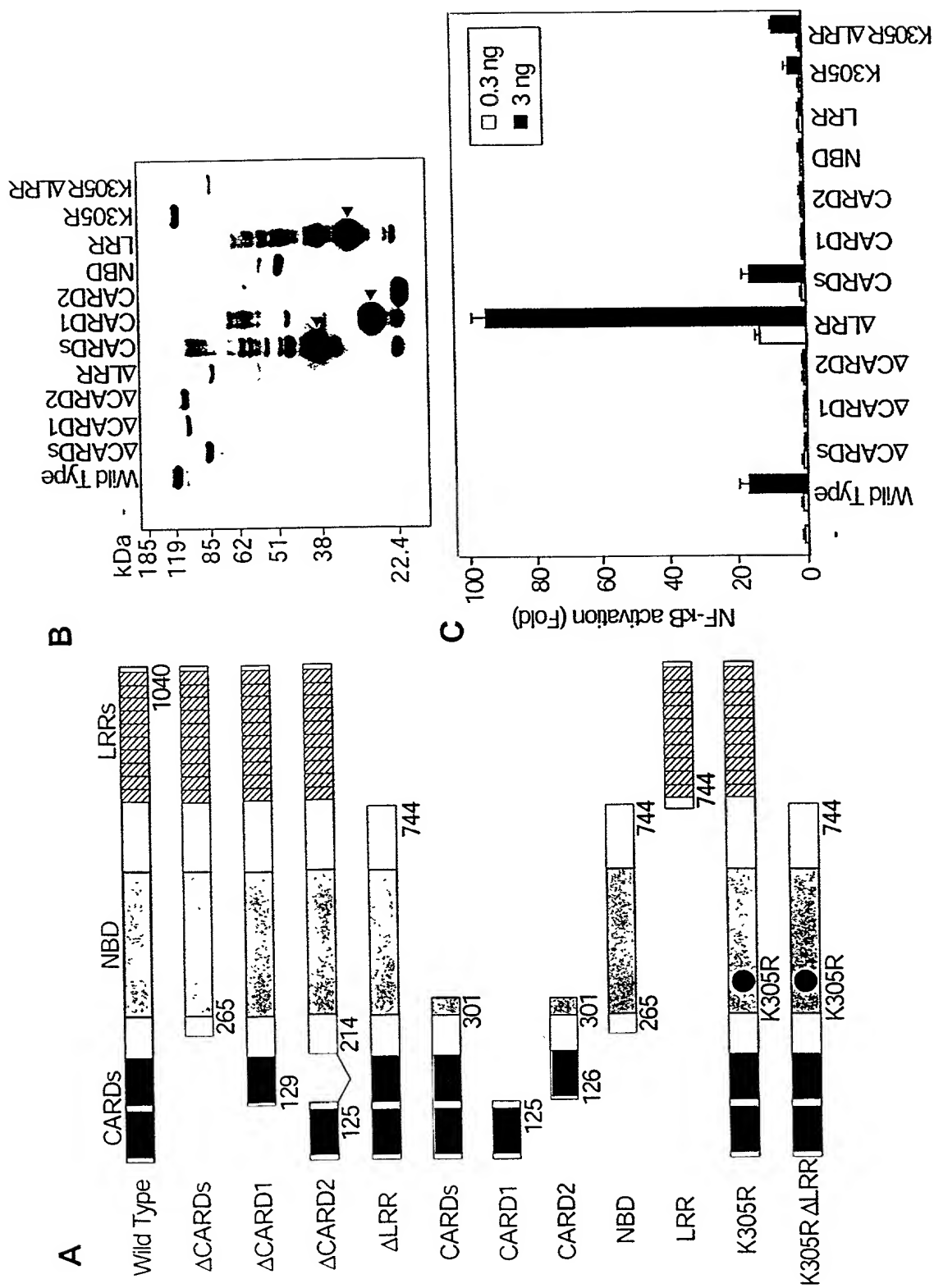


Figure 4

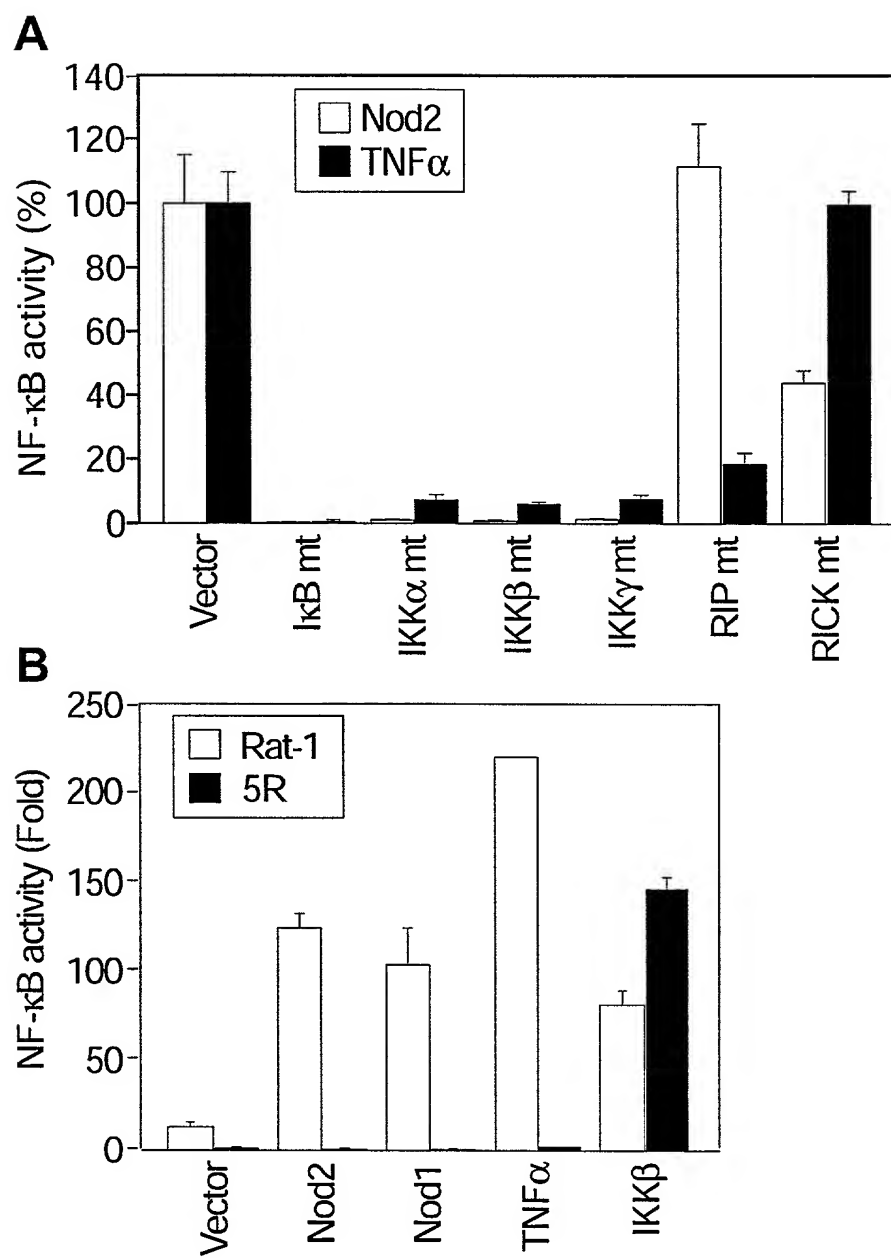


Figure 5

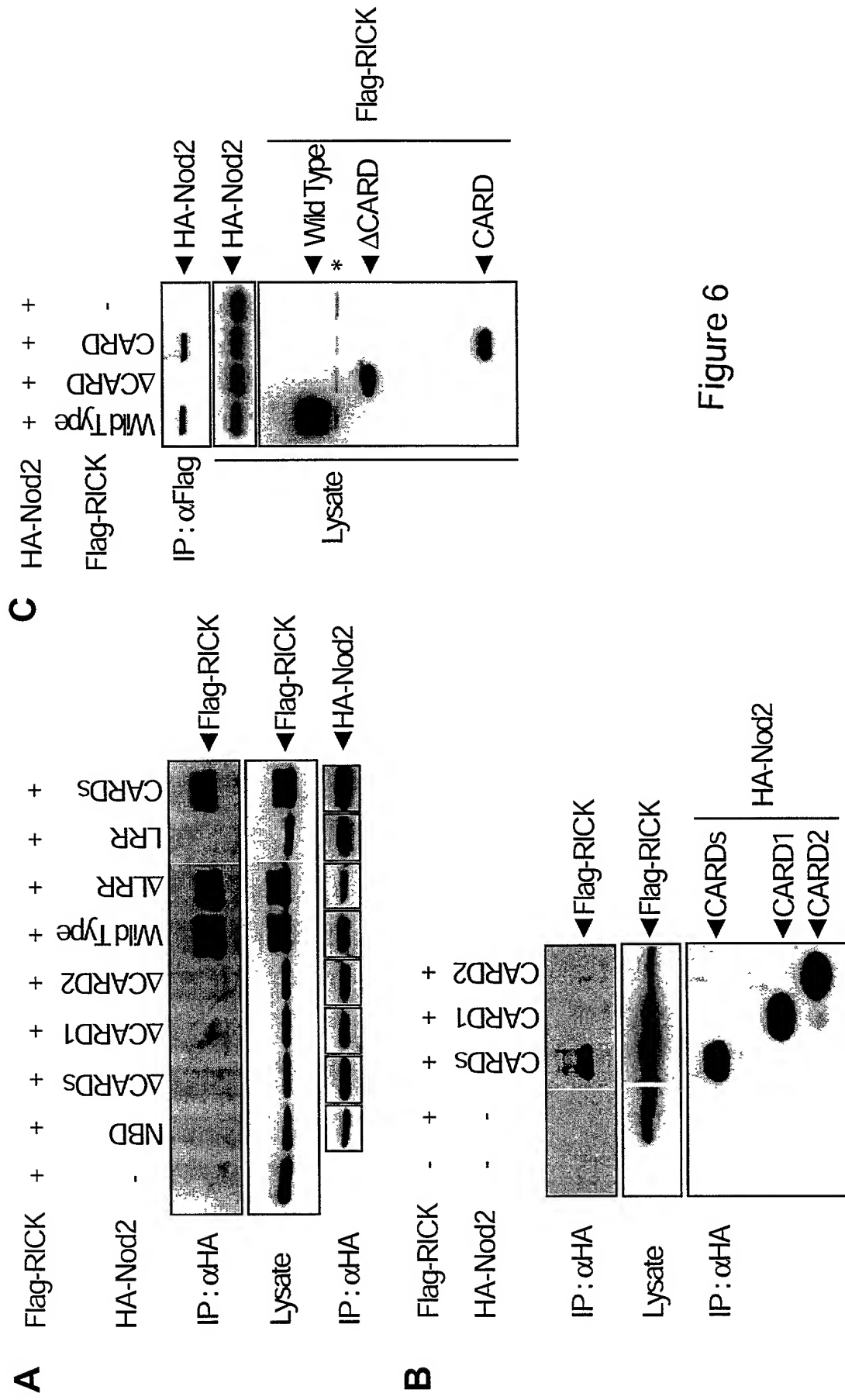


Figure 6

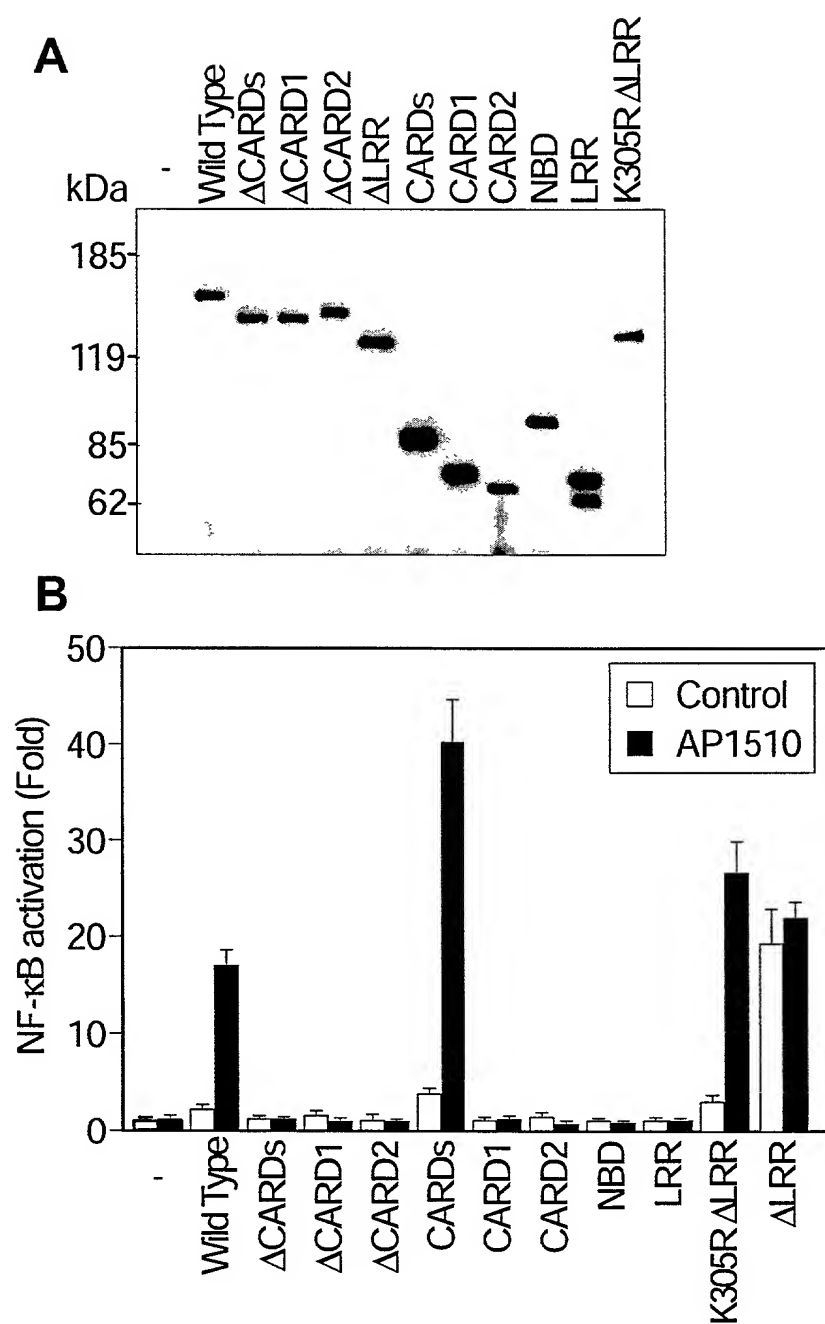
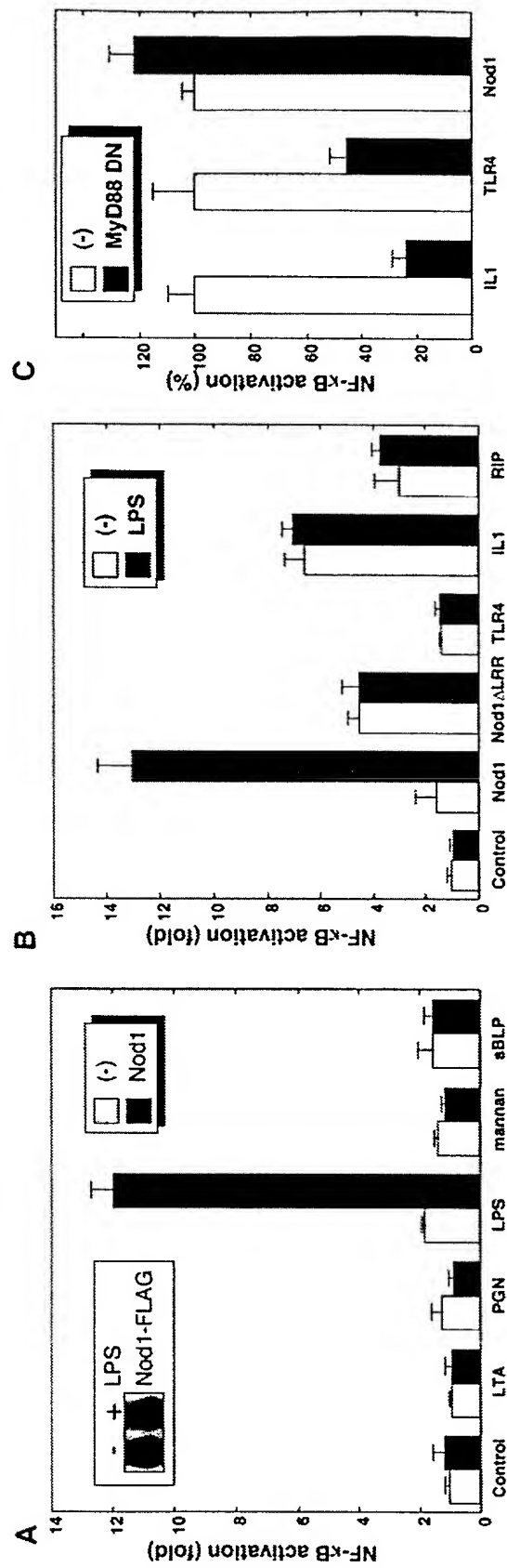


Figure 7



**Figure 8**



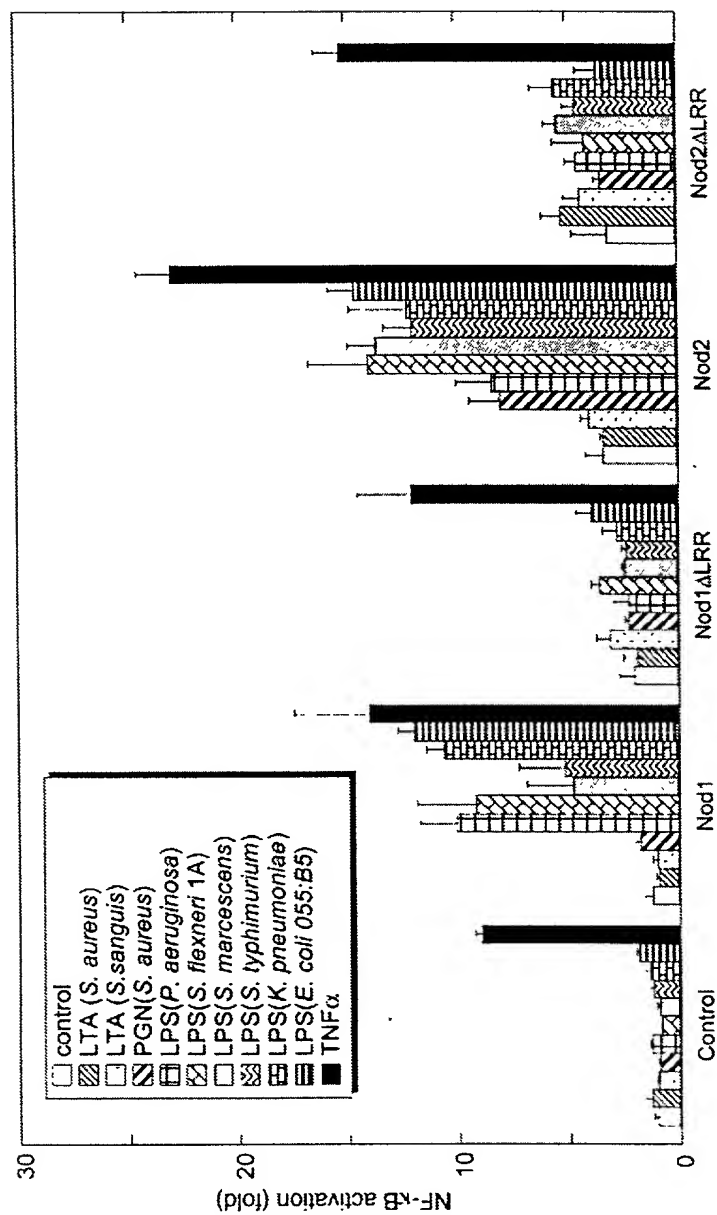
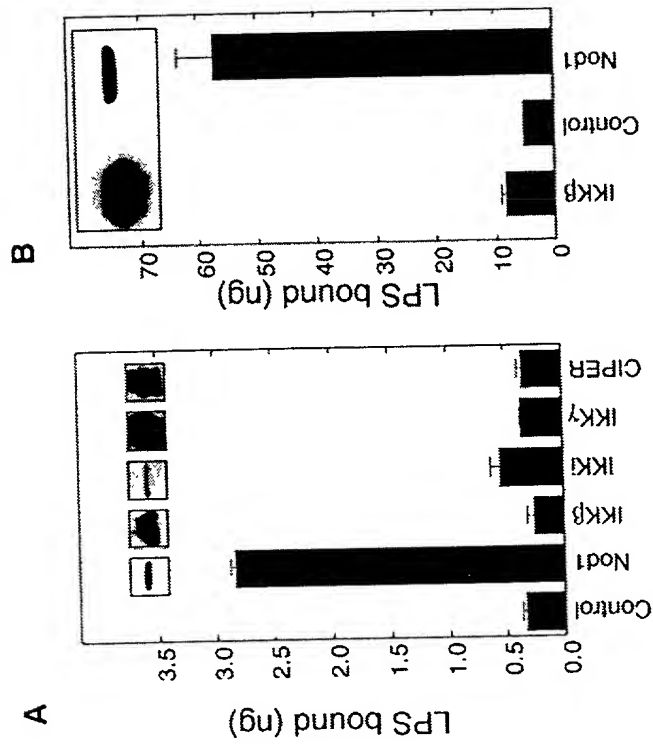


Figure 9



**Figure 10**

# Figure 11

## SEQ ID NO:33

Nod2 cDNA sequence

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ctctcctggg aggactacga gggcttcac ctctggggc agcctctctc ccacttgccc	360
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# Figure 12

## SEQ ID NO:1

### Nod2 cDNA sequence

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# Figure 13

## SEQ ID NO:2

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GCWDPHSLHP ARDLQSHRPA IVRRLHSHVE NMLDLAWERG FVSQYECDEI RLPIFTPSQR  
ARRLLDLATV KANGLAAFL L QHVQELPVPL ALPLEAATCK KYMAKLRRTV SAQSRFLSTY  
DGAETLCLED IYTENVLEVW ADVGMAGPPQ KSPATLGLLE LFSTPGHLND DADTVLVVGE  
AGSGKSTLLQ RLHLLWAAGQ DFQEFLLFVFP FSCRQLQCMA KPLSVRTLLF EHCCWPDVGQ  
EDIFQLLLDH PDRVLLTFDG FDEFKFRFTD RERHCSPTDP TSVQTLLFNL LQGNLLKNAR  
KVVTSRPAAV SAFLRKYIRT EFNKGFSEQ GIELYLRKRH HEPGVADRLI RLLQETSALH  
GLCHLPVFSW MVSCHQELL LQEGGSPKTT TDMYLLILQH FLLHATPPDS ASQGLGPSLL  
RGRLLPTLLHL GRLALWGLGM CCYVFSAQQL QAAQVSPDDI SLGFLVRAKG VVPGSTAPLE  
FLHITFQCFE AAFYLALSAD VPPALLRHLF NCGRPGNSPM ARLLPTMCIQ ASEGKDSSVA  
ALLQKAEPHN LQITAAFLAG LLSREHWGLL AECQTSEKAL LRRQACARWC LARSLRKHFH  
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HCEQLQKLAL FNNKLTGCA HSMAKLLACR QNFLALRLGN NYITAAGA QV LAEGLRGNTS  
LQFLGFWGNR VGDEGAQALA EALGDHQLSR WLSLVGNNIG SVGAQALALM LAKNVMLEEL  
CLEENHLQDE GVCSLAEGLK KNSSLKILKL SNNCITYLGA EALLQALERN DTILEVWL RG  
NTFSLEEVDK LGCRDTRLLL \*

## Figure 14

SEQ ID NO:3

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LLDTVWNKGT WACQKLIAAA QEAQADSQSP KLHGCWDPHS LHPARDLQSH RPAIVRRRLHS  
HVENMLDLAW ERGFVSQYEC DEIRLPIFTP SQRARRLLDL ATVKANGLAA FLLQHVQELP  
VPLALPLEAA TCKKYMALR TTVSAQSRFL STYDGAETLC LEDIYTENVL EVWADVGMAG  
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VFPFSCRQLQ CMAKPLSVRT LLFEHCCWPD VGQEDIFQLL LDHPDRVLLT FDGFDEFKFR  
FTDRERHCSP TDPTSVQTLL FNLLQGNLLK NARKVVTSRP AAVSAFLRKY IRTEFNLKGF  
SEQGIELYLR KRHHEPGVAD RLIRLLQETS ALHGLCHLPV FSWMVSKCHQ ELLLQEGGSP  
KTTTDMYLLI LQHFL LHATP PDSASQGLGP SLLRGR LPTL LHLGR LALWG LGMCCYVFSA  
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1000294.10001

Figure 15  
SEQ ID NO:34

Nod2a AA sequence, Mutant

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GCWDPHSLHP ARDLQSHRPA IVRRLHSHVE NMLDLAWERG FVSQYECDEI RLPIFTSPQR  
ARRLLDLATV KANGLAAFL L QHVQELPVPL ALPLEAATCK KYMAKLRTTV SAQSRFLSTY  
DGAETLCLED IYTENVLEVW ADVGMAGPPQ KSPATLGLEE LFSTPGHLND DADTVLVVGE  
AGSGKSTLLQ RLHLLWAAGQ DFQEFLLVFP FSCRQLQCMA KPLSVRTLLEF EHCCWPDVGQ  
EDIFQLLLDH PDRVLLTFDG FDEFKFRFTD RERHCSPTDP TSVQTLLFNL LQGNLLKNAR  
KVVTSPAAV SAFLRKYIRT EFNLLKGFSEQ GIELYLKRKH HEPGVADRLI RLLQETSALH  
GLCHLPVFSW MVSCHQELL LQEGGSPKTT TDMYLLILQH FLLHATPPDS ASQGLGPSLL  
RGRLPTLLHL GRLALWGLGM CCYVFSAQQL QAAQVSPDDI SLGFLVRAKG VVPGSTAPLE  
FLHITFCFF AAFYLALSAD VPPALLRHLF NCGRPGNSPM ARLLPTMCIQ ASEGKDSSVA  
ALLQKAEPHN LQITAAFLAG LLSREHWGLL AECQTSEKAL LRRQACARWC LARSLRKHFH  
SIPPAAPGEA KSVHAMPGFI WLIRSLYEMQ EERLARKAAR GLNVGHLKLT FCSVGPTTECA  
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CLEENHLQDE GVCSLAEBLK KNSSLKILKL SNNCITYLGA EALLQAP\*

## FIGURE 16

### Nod2 Exon11, Wild type

cagacatgag caggatgtgt ctaagggaca ggtgggcttc agtagactgg ctaactcctg

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tatcttcttt tccagGTTGT CCAATAACTG CATCACCTAC CTAGGGGCAG AAGCCCTCCT

L S N N C I T Y L G A E A L L

GCAGGCCCTT GAAAGGAATG ACACCATCCT GGAAGTCTGg taaggcccct gggcaggcct

Q A L E R N D T I L E V

gttttagctc tccgaacctc agtttttcta tctgtaaaat ggggtgacgg gagagaggaa

tggcagaatt ttgaggatcc cttctgattc tgacattcag tgagaatgat tctgcatgtg

### Nod2 Exon11, Mutant

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cagtctcttt aactggacag tttcaagagg aaaaccaaga atccttgaag ctcaccattg

tatcttcttt tccagGTTGT CCAATAACTG CATCACCTAC CTAGGGGCAG AAGCCCTCCT

L S N N C I T Y L G A E A L L

GCAGGCCCTT TGAAAGGAAT GACACCATCC TGGAAGTCTG gtaaggcccc tgggcaggcc

Q A P \*

tgtttagct ctccgaacct cagtttttct atctgtaaaa tggggtgacg ggagagagga

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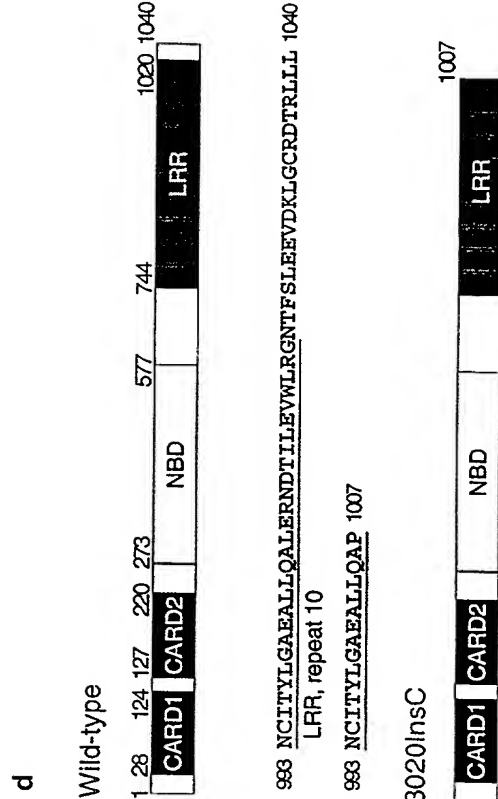
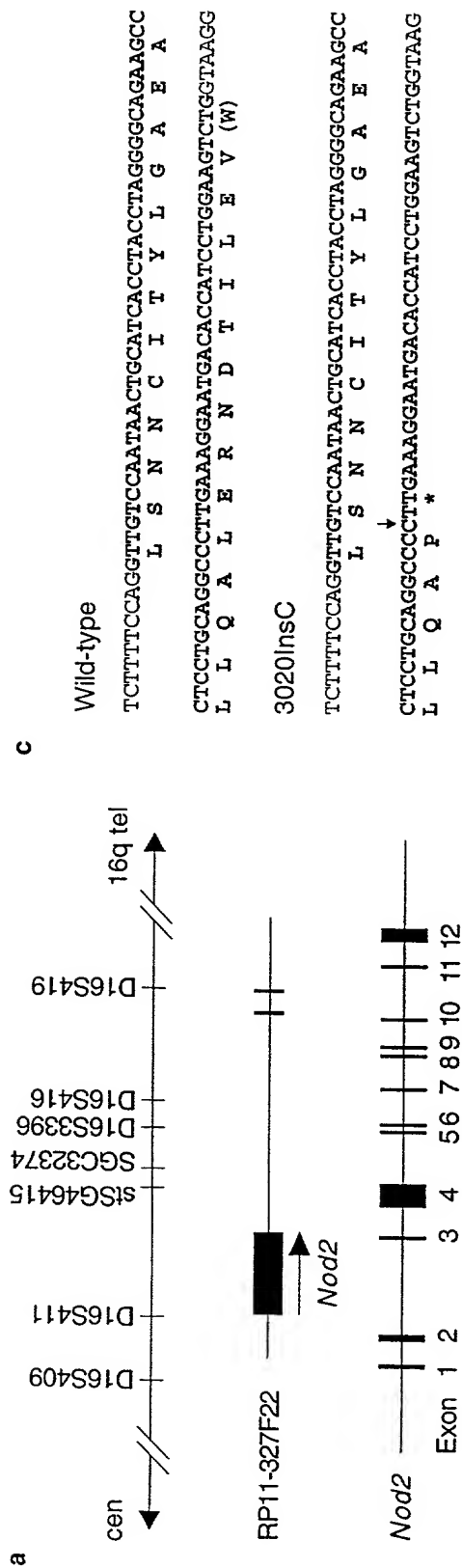
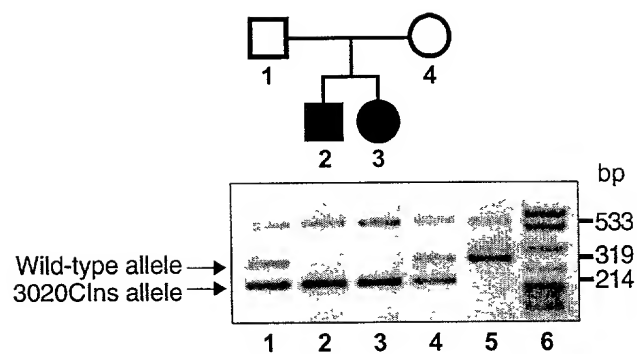
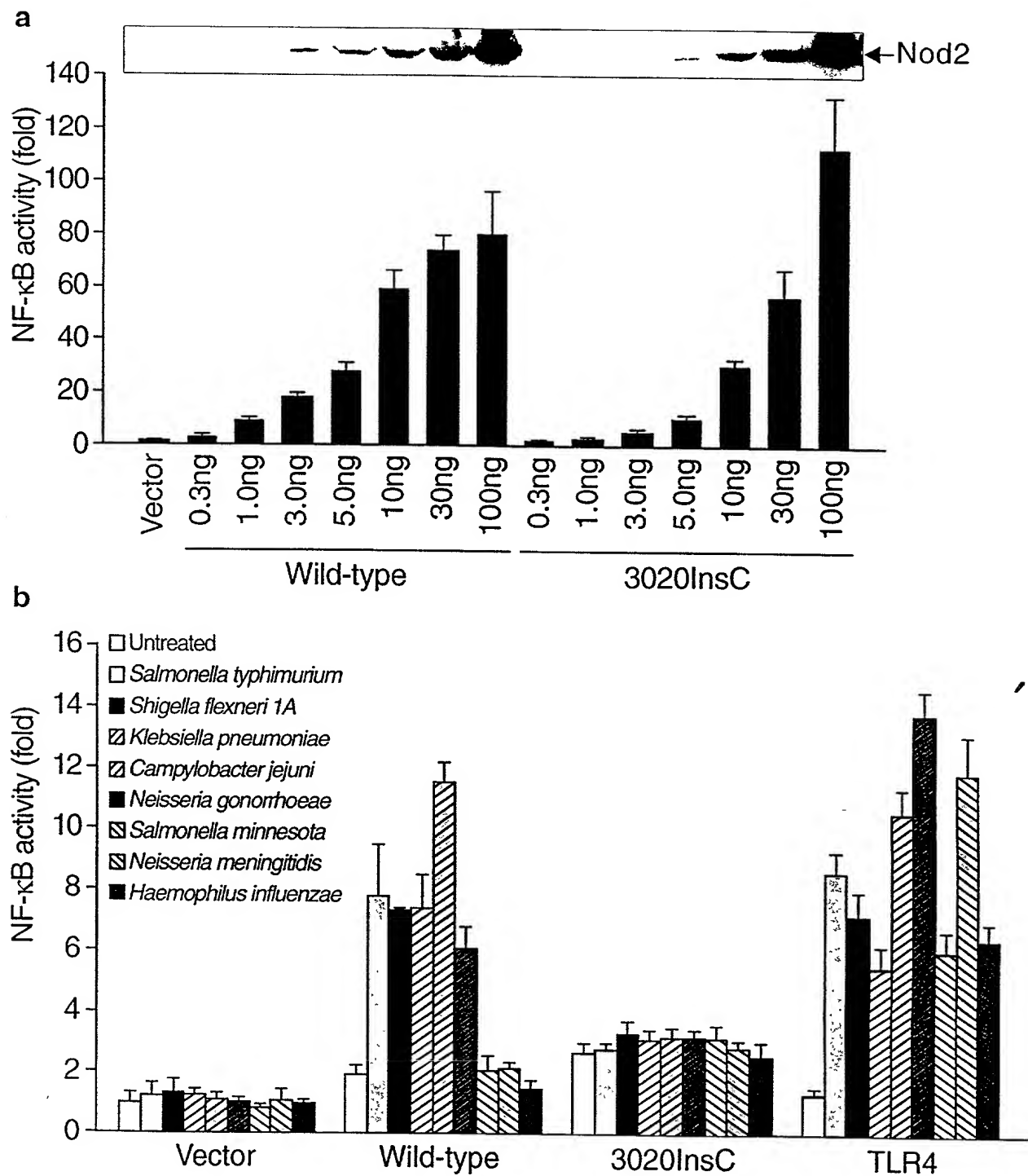


Figure 17



**Figure 18**



**Figure 19**



## Figure 20

### SEQ ID NO: 53

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tga

[illegible][illegible]

## Figure 22

### SEQ ID NO: 55

60 MGEEGGSASH DEEBRASVLL GHSPGCEMCS QEAFQAQRSQ LVELLVSGSL EGFESVLDWL  
120 LSWEVLSWED YEGFHLGQP LSHLARLLD TVWNKGTWAC QKLIAAAQEA QADSQSPKLH  
180 GCWDPHSLHP ARDLQSHRPA IVRRLHSHVE NMLDLAWERG FVSQYECDEI RLPIFTPSQR  
240 ARRLDLATV KANGLAAFLI QHVQELPVPL ALPLEAATCK KYMAKLRTTV SAQSRFLSTY  
300 DGAETLCLED IYTENVLEW ADVGMAGSPQ KSPATLGLEE LFSTPGHLND DADTVLVVGE  
360 AGSGKSTLLQ RLHLLWAAGQ DFQEFLLVFP FSCRQLQCMA KPLSVRTLLF EHCCWPDVGQ  
420 EDIFQLLLDH PDRVLLTFDG FDEFKFRFTD RERHCSPTDP TSVQTLLFNL LQGNLLKNAR  
480 KVVTSRPAAV SAFLRKYIRT EFNKGFSEQ GIELYLRKRH HEPGVADRLLI RLLQETSALH  
540 GLCHLPVFSW MVSCHQELL LQEGGSPKTT TDMYLLILQH FLLHATPPDS ASQGLGPSLL  
600 RGRLPDLLHL GRLALWGLGM CCYVFSAAQL QAAQVSPDDI SLGFLVRAKG VVPGSTAPLE  
660 FLHITFQCFE AAFYLALSAD VPPALLRHLF NGRPGNSPM ARLLPTMCIQ ASEGKDSSVA  
720 ALLQKAEPHN LQITAAFLAG LLSREHWGLL AECQTSEKAL LRRQACARWC LARSLRKHFH  
780 SIPPAAPGEA KSVHAMPFI WLIRSLYEMQ EERLARKAAR GLNVGHLKLT FCSVGPTECA  
840 ALAFVLQHLR RPVALQLDYN SVGDIGVEQL LPCLGVCKAL YLRDNNISDR GICKLIECAL  
900 HCEQLQKLAL FNNKLTGCA HSMAKLLACR QNFLALRLGN NYITAAGAQV LAEGLRGNTS  
960 LQFLGFWGNR VGDEGAQALA EALGDHQSLR WLSLVGNIG SVGAQALALM LAKNVMLEEL  
1007 CLEENHLQDE GVCSLAEGK KNSSLKILKL SNNCITYLGA EALLQAPP\*

# Figure 23

## SEQ ID NO: 56

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tga

10002974.102601

# Figure 24

## SEQ ID NO: 57

MGEEGGSASHDEEERASVLLGHSPGCEMCSQEAFQAQRSQVLELLVSGSLEGFESVLDWLLSWEVLSWEDYEGFHLLGQP  
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FVSQYECDEIRLPIFTSPQRARRLLDLATVKANGLAAFLQHVQELPVPLALPLEAATCKKYMALRRTTVSAQSRFLSTY  
DGAETLCLEDIYTENVLEVWADVGMAGPPQKSPATLGLEELFSTPGHLNDDADTVLVVGEAGSGKSTLLQRLHLLWAAGQ  
DFQEFLFVFPFSCRQLQCMAPLSVRTLLFEHCCWPDVGQEDIFQLLLDHPDRVLLTFDGFDEFKFRFTDRERHCSPTDP  
TSVQTLLFNLLQGNLLKNARKVVTSRPAAVSAFLRKYIRTEFNLKGFSEQGIELYLRKRHHEPGVADRLIRLLQETSALH  
GLCHLPVFSWMVSKCHQELLLQEGGSPKTTTDMYLLILQHFLHATPPDSASQGLGPSLLRGRLPPTLLHLGRLALWGLGM  
CCYVFSAQQLQAAQVSPDDISLGFLVRAGVVPGSTAPLEFLHITFQCFFAAFYLAALSADVPPALLRHLFNCGRPGNSPM  
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SIPPAAPGEAKSVHAMPGFIWLIRSLYEMQEERLARKAARGLNVGHLKLTFCVGPTECAALAFVLQHLRRPVALQLDYN  
SVGDIGVEQLLPCLGVCKALYLRDNNISDRGICKLIECALHCEQLQKLALFNNKLTGCAHSMAKLLACRQNFALRLGN  
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CLEENHLQDEGVCSLAEGLKKNSSLKILKLSNNCITYLGAEALLQALERNDTILEVWLRGNTFSLEEVDKLGCRDTRLLL

\*

Figure 24

**Figure 25**  
**SEQ ID NO: 58**

atgggggaagaggggtggttcagcctctcacgatgaggaggaaagagcaagtgtcctcctcggacattctccgggttgatga  
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tga

10002974.102901

SNP	Allele	SNP Sequence*	AA Polymorphism	AA Location	cDNA Location
SNP4	1	GGCAGATGTGGGCATGGCTGGACCC; SEQ ID NO:70	P	P 268 S	nt 802
	2	GGCAGATGTGGGCATGGCTGGAICC; SEQ ID NO:71	S		
SNP20	1	AGACATCTGAGAAGGCCCTGCTCCGG; SEQ ID NO:72	R	R 702 W	nt 2104
	2	AGACATCTGAGAAGGCCCTGCTCIGG; Seq ID NO:73	W		
SNP7	1	CTGCAGCACCTCCGGCGGCCCGTG; SEQ ID NO:74	V	V 793 M	nt 2377
	2	CTGCAGCACCTCCGGCGGCCCATG; SEQ ID NO:75	M		
SNP18	1	TTGCAGAAAGTTAGCTCTATTCAAC; SEQ ID NO:76	N	N 852 S	nt 2555
	2	TTGCAGAAAGTTAGCTCTATTCAAGC; SEQ ID NO:77	S		
SNP25	1	ACTGACGGCTGTGCACACTCCATG; SEQ ID NO:78	M	M 863 V	nt 2587
	2	ACTGACGGCTGTGCACACTCCGTG; SEQ ID NO:79	V		
SNP17	1	TGCAGTTCCTGGGATTCTGGGGC; SEQ ID NO:80	G	G 908 R	nt 2722
	2	TGCAGTTCCTGGGATTCTGGCGC; SEQ ID NO:81	R		
SNP23	1	CACTGATGCTGGCAAAGAACGTC; SEQ ID NO:82	V	V 955 I	nt 2863
	2	CACTGATGCTGGCAAAGAACATC; SEQ ID NO:83	I		
3020C ins	1	GGGCAGAAAGCCCTCCTGCAGGCCCT; SEQ ID NO:90	wild-type		nt 3020
	2	GGGCAGAAAGCCCTCCTGCAGGCCCT; SEQ ID NO:91	frameshift mutation	Δ33	
		*Underlined is mutated base			
		*Nucleotide/amino acid numbers designate the positions in Nod2a as reported by Ogura et al. J. Biol. Chem. 276:4812 [2001]			
		AA = amino acid			
		SNP= single nucleotide polymorphism			

Figure 26

項目	1990年	1991年	1992年	1993年	1994年	1995年	1996年	1997年	1998年	1999年	2000年	2001年	2002年	2003年	2004年	2005年	2006年	2007年	2008年	2009年	2010年	2011年	2012年	2013年	2014年	2015年	2016年	2017年	2018年	2019年	2020年	2021年	2022年	2023年	2024年	2025年	2026年	2027年	2028年	2029年	2030年	2031年	2032年	2033年	2034年	2035年	2036年	2037年	2038年	2039年	2040年	2041年	2042年	2043年	2044年	2045年	2046年	2047年	2048年	2049年	2050年	2051年	2052年	2053年	2054年	2055年	2056年	2057年	2058年	2059年	2060年	2061年	2062年	2063年	2064年	2065年	2066年	2067年	2068年	2069年	2070年	2071年	2072年	2073年	2074年	2075年	2076年	2077年	2078年	2079年	2080年	2081年	2082年	2083年	2084年	2085年	2086年	2087年	2088年	2089年	2090年	2091年	2092年	2093年	2094年	2095年	2096年	2097年	2098年	2099年	2100年																																																								
人口	120,000,000	121,000,000	122,000,000	123,000,000	124,000,000	125,000,000	126,000,000	127,000,000	128,000,000	129,000,000	130,000,000	131,000,000	132,000,000	133,000,000	134,000,000	135,000,000	136,000,000	137,000,000	138,000,000	139,000,000	140,000,000	141,000,000	142,000,000	143,000,000	144,000,000	145,000,000	146,000,000	147,000,000	148,000,000	149,000,000	150,000,000	151,000,000	152,000,000	153,000,000	154,000,000	155,000,000	156,000,000	157,000,000	158,000,000	159,000,000	160,000,000	161,000,000	162,000,000	163,000,000	164,000,000	165,000,000	166,000,000	167,000,000	168,000,000	169,000,000	170,000,000	171,000,000	172,000,000	173,000,000	174,000,000	175,000,000	176,000,000	177,000,000	178,000,000	179,000,000	180,000,000	181,000,000	182,000,000	183,000,000	184,000,000	185,000,000	186,000,000	187,000,000	188,000,000	189,000,000	190,000,000	191,000,000	192,000,000	193,000,000	194,000,000	195,000,000	196,000,000	197,000,000	198,000,000	199,000,000	200,000,000	201,000,000	202,000,000	203,000,000	204,000,000	205,000,000	206,000,000	207,000,000	208,000,000	209,000,000	210,000,000	211,000,000	212,000,000	213,000,000	214,000,000	215,000,000	216,000,000	217,000,000	218,000,000	219,000,000	220,000,000	221,000,000	222,000,000	223,000,000	224,000,000	225,000,000	226,000,000	227,000,000	228,000,000	229,000,000	230,000,000	231,000,000	232,000,000	233,000,000	234,000,000	235,000,000	236,000,000	237,000,000	238,000,000	239,000,000	240,000,000	241,000,000	242,000,000	243,000,000	244,000,000	245,000,000	246,000,000	247,000,000	248,000,000	249,000,000	250,000,000	251,000,000	252,000,000	253,000,000	254,000,000	255,000,000	256,000,000	257,000,000	258,000,000	259,000,000	260,000,000	261,000,000	262,000,000	263,000,000	264,000,000	265,000,000	266,000,000	267,000,000	268,000,000	269,000,000	270,000,000	271,000,000	272,000,000	273,000,000	274,000,000	275,000,000	276,000,000	277,000,000	278,000,000	279,000,000	280,000,000	281,000,000	282,000,000	283,000,000	284,000,000	285,000,000	286,000,000

snp4	snp20	snp7	snp18	snp17	snp23	3020insC	comment
1	1	1	1	1	1	1	common
2	1	1	1	1	1	1	about 10% allele frequency in controls
2	2	1	1	1	1	1	about 4% allele frequency in controls
2	1	1	1	2	1	1	about 1-2% allele frequency in controls
2	1	1	1	1	1	2	about 3-4% allele frequency in controls
1	1	1	1	1	1	1	very rare: 4/400 patients are heterozygous; occurs on allele 1 of snp4
1	1	2	1	1	1	1	very rare: arms not working
2	1	1	2	1	1	1	very rare: arms working
1	1	1	1	1	2	1	very rare: arms working

## Figure 27



1. The first step is to identify the problem. This involves understanding the situation, gathering information, and defining the problem clearly.

2. The second step is to analyze the problem. This involves breaking down the problem into smaller parts, identifying the causes, and determining the scope of the problem.

3. The third step is to develop a plan. This involves identifying the resources available, setting priorities, and determining the steps that need to be taken to solve the problem.

4. The fourth step is to implement the plan. This involves putting the plan into action, monitoring progress, and making adjustments as needed.

5. The fifth step is to evaluate the results. This involves assessing the effectiveness of the solution, identifying any remaining issues, and determining the next steps.

\*

# Figure 29

## SEQ ID NO: 60

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**Figure 30**  
**SEQ ID NO: 61**

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\*

Figure 30

# Figure 31

## SEQ ID NO: 62

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Figure 33  
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**Figure 34**  
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100022974.102501

# Figure 35

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gggcaacagagtgggtgacgagggggccaggccctggctgaagccttgggtgatcaccagagcttgaggtggctcagcc  
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cctgaagttgtccaataactgcacacacacaggggcagaagccctcctgcaggcccttgaaaggaatgacacacatcc  
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tga

10002974.102601



[illegible]

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Figure 37  
SEQ ID NO: 68

atgggggaagaggggtgggttcagcctctcacgatgaggaggaaagagcaagtgtcctcctcgacattctccgggttgatga  
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ccaagaagcccaggccgacagccagtcacccaagctgcatggctgctgggacccccactcgctccacccagcccagacc  
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gacttccaggaatttctctttgtcttccattcagctgccggcagctgcagtgcatggccaaacctctctgtgcggac  
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ggcgcgtgtgctcggttctcaggaagtacatccgcaccgagttcaacctcaagggcttctctgaacagggcatcgagc  
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tga

[illegible]

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**Figure 39**  
**SEQ ID NO: 84**

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agagtgtcctggactggctgctgtcctgggaggtcctctcctgggaggactacgaggggtccacacctcctgggccagcct  
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ccaagaagcccaggccgacagccagtcceccaagctgcatggctgctgggacccccactcgctccaccagcccagagacc  
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tggaagctgccacatgcaagaagtatatggccaagctgaggaccacgggtgtctgctcagtcctcgcttccctcagtaacctat  
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tctactctttgagcactgctgttggcctgatgttggtcaagaagacatcttcagttactccttgaccacctgaccgtg  
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ggcgctgtgtcgcggttccctcaggaagtacatccgcaccgagttcaacctcaagggttctctgaacagggcatcgagc  
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aaagaccactacagatatgtacctgctgattctgcagcattttctgctgcattgccacccccagactcagcttcccaag  
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cctgaagttgtccaataactgcatacctacctaggggcagaagccctcctgcaggcccttgaaaggaatgacaccatcc  
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tga

100294 10601

Figure 40  
SEQ ID NO: 85

MGEEGGSASHDEEERASVLLGHSPGCEMCSQEAFQAQRSQLVELLVSGSLEGFESVLDWLLSWEVLSWEDYEGFHLLGQP  
LSHLARRLLDTVWNKGTWACQKLIAAAQEAQADSQSPKLHGCWDPHSLHPARDLQSHRPAIVRRLHSHVENMLDLAWERG  
FVSQYECDEIRLPIFTSPQRARRLLDLATVKANGLAAFLQHVQELPVPLALPLEAATCKKYMALRRTTVSAQSRFLSTY  
DGAETLCLEDIYTENVLEVWADVGMAGSPQKSPATLGLEELFSTPGHLNDDADTVLVVGEAGSGKSTLLQRLHLLWAAGQ  
DFQEFLLFVFPFSCRQLQCMAPLSVRTLLFEHCCWPDVGQEDIFQLLLDHPDRVLLTFDGFDEFKFRFTDRERHCSPTDP  
TSVQTLLFNLLQGNLLKNARKVVTSRPAAVSAFLRKYIRTEFNLKGFSEQGIELYLRKRHHEPGVADRILRLLQETSALH  
GLCHLPVFSWMVSKCHQELLLQEGGSPKTTTDMYLLILQHFLHATPPDSASQGLGPSLLRGRLPDLLHLGRLLALWGLGM  
CCYVFSQQQLQAAQVSPDDISLGFLVRAKGVVPGSTAPLEFLHITFQCFFAAYLALSADVPPALLRHLFNCGRPGNSPM  
ARLLPTMCIQASEGKDSSVAALLQKAEPHNLQITAAFLAGLLSREHWGLLAECQTSEKALLRRQACARWCLARSLRKHFH  
SIPPAAPGEAKSVHAMPGFILWIRSLYEMQEERLARKAARGLNVGHLKLTFCVGPTECAALAFVLQHLRRPVALQLDYN  
SVGDIGVEQLLPCLGVCKALYLRDNNISDRGICKLIECALHCEQLQKLALFNKLTDCAHSMAKLLACRQNFALRLGN  
NYITAAGAQLAEGLRGNTSLQFLGFWRNRVGDEGAQALAEALGDHQSRLWLSLVGNNIGSVGAQALALMLAKNVMLEEL  
CLEENHLQDEGVCSLAEGLKKNSSLKILKLSNNCITYLGAEALLQALERNDTILEVWLRGNTFSLEEVDKLGCRDTRLLL  
\*

100294.10001

Figure 1. Schematic representation of the experimental design. The subjects were divided into two groups: the control group and the experimental group. The control group received a standard diet and water, while the experimental group received a diet supplemented with 0.5% of the test substance. The subjects were divided into two groups: the control group and the experimental group. The control group received a standard diet and water, while the experimental group received a diet supplemented with 0.5% of the test substance. The subjects were divided into two groups: the control group and the experimental group. The control group received a standard diet and water, while the experimental group received a diet supplemented with 0.5% of the test substance.

Figure 1. Schematic representation of the experimental design. The subjects were divided into two groups: the control group and the experimental group. The control group received a standard diet and water, while the experimental group received a diet supplemented with 0.5% of the test substance. The subjects were divided into two groups: the control group and the experimental group. The control group received a standard diet and water, while the experimental group received a diet supplemented with 0.5% of the test substance. The subjects were divided into two groups: the control group and the experimental group. The control group received a standard diet and water, while the experimental group received a diet supplemented with 0.5% of the test substance.

**Figure 42**  
**SEQ ID NO: 87**

MGEEGGSASHDEEERASVLLGHSPGCEMCSQEAFQAQRSQVVELLVSGSLEGFESVLDWLLSWEVLSWEDYEGFHLLGQP  
LSHLARRLLDTVWNKGTWACQKLIAAAQEAQADSQSPKLHGCWDPHSLHPARDLQSHRPAIVRRLHSHVENMLDLAWERG  
FVSQYECDEIRLPIFTSPQRARRLLDLATVKANGLAAFLQHVQELPVPLALPLEAATCKKYMALRRTTVSAQSRFLSTY  
DGAETLCLEDIYTENVLEVWADVGMAGSPQKSPATLGLEELFSTPGHLNDDADTVLVVGEAGSGKSTLLQRLHLLWAAGQ  
DFQEFLLVFPFSCRQLQCMAPLSVRTLLFEHCCWPDVGQEDIFQLLLDHPDRVLLTFDGFDEFKFRFTDRERHCSPTDP  
TSVQTLLFNLLQGNLLKNARKVVTSRPAAVSAFLRKYIRTEFNLKGFSEQGIELYLKRHHHEPGVADRLLIRLLQETSALH  
GLCHLPVFSWMVSKCHQELLLQEGGSPKTTTDMYLLILQHFLHATPPDSASQGLGPSLLRGRLLPTLLHLGRLLALWGLGM  
CCYVFSQAQLQAAQVSPDDISLGLVRAKGVVPGSTAPLEFLHITFQCFFAAFYLALSADVPPALLRHLFNCGRPGNSPM  
ARLLPTMCIQASEGKDSSVAALLQKAEPHNLQITAAFLAGLLSREHWGLLAECQTSEKALLRRQACARWCLARSLRKHFH  
SIPPAAPGEAKSVHAMPGFIWLIRSLYEMQEERLARKAARGLNVGHLKLTFCSVGPTCAALAFVLQHLRRPVALQLDYN  
SVGDIGVEQLLPCLGVCKALYLRDNNISDRGICKLIECALHCEQLQKLALFSNKLTDGCAHSMAKLLACRQNFALRLGN  
NYITAAGAVLAEGLRGNTSLQFLGFWGNRVGDEGAQALAEALGDHQSRLWLSLVGNNGSVGAQALALMLAKNVMLEEL  
CLEENHLQDEGVCSLAEGLKKNSSLKILKLSNNCITYLGAEALLQALERNDTILEVWLRGNTFSLEEVDKLGCRDTRLLL  
\*

1000294.102601

[illegible]

tga



**Figure 44**  
**SEQ ID NO: 89**

MGEEGGSASHDEEERASVLLGHSPGCEMCSQEAFAQRSQLVELLVSGSLEGFESVLDWLLSWEVLSWEDYEGFHLLGQP  
LSHLARRLLDTVWNKGTWACQKLIAAAQEAQADSQSPKLHGCWDPHSLHPARDLQSHRPAIVRRLHSHVENMLDLAWERG  
FVSQYECDEIRLPIFTSPQRARRLLDLATVKANGLAAFLLOHVQELPVPLALPLEAATCKKYMALRRTTVSAQSRFLSTY  
DGAETLCLEDIYTENVLEVWADVGMAGSPQKSPATLGLEELFSTPGHLNDDADTVLVVGEAGSGKSTLLQRLHLLWAAGQ  
DFQEFLFVFPFSCRQLQCMAPLSVRTLLFEHCCWPDVGQEDIFQLLLDHPDRVLLTFDGFDEFKFRFTDRERHCSPTDP  
TSVQTLLFNLLQGNLLKNARKVVTSRPAAVSAFLRKYIRTEFNLKGFSEQGIELYLRKRHHEPGVADRILIRLLQETSALH  
GLCHLPVFSWMVSKCHQELLLQEGGSPKTTTDMYLLILQHFLHATPPDSASQGLGPSLLRGRLPTLLHLGRLALWGLGM  
CCYVFSQQQLQAAQVSPDDISLGFLVRAKGVVPGSTAPLEFLHITFQCFFAAFYLAALSADVPPALLRHLFNCGRPGNSPM  
ARLLPTMCIQASEGKDSSVAALLQKAEPHNLQITAAFLAGLLSREHWGLLAECQTSEKALLWRQACARWCLARSLRKHFH  
SIPPAAPGEAKSVHAMPGFIWLIRSLYEMQEERLARKAARGLNVGHLKLTFCSVGPTCAALAFVLQHLRRPVALQLDYN  
SVGDIGVEQLLPCLGVCKALYLRDNNISDRGICKLIECALHCEQLQKLALFNNKLTGCAHSMAKLLACRQNFALRLGN  
NYITAAGAQVLAEGLRGNTSLQFLGFWGNRVGDEGAQALAEALGDHQSRLWLSLVGNNIGSVGAQALALMLAKNVMLEEL  
CLEENHLQDEGVCSLAEGLKKNSSLKILKLSNNCITYLGAEALLQALERNDTILEVWLRGNTFSLEEVDKLGCRDTRLLL  
\*

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